# THE NAUTILUS 

# TRAVELING AND COLLECTING IN MEXICO 

By A. SORENSEN

Now that Mexico has become one of the combatants in this the greatest of all world contests it is coing to be more difficult for other mationals to enter or leave it, beeause border regulations on both sides are much stricter than formerly. So it may be of interest to record some previous trips and tell what was seen and what was achieved in the way of collecting marine life in the Gulf of California.

For some years previous to 1940 the writer had made short trips into the northern part of Lower California, known to the Mexicans as Baja California. It is that long narrow peninsula with its backbone of fairly high mountains that extends south from California for more than 750 miles. It is bordered on the west by the Pacific Ocean and on the east by the Gulf of California. The backbone mentioned is the southward continuation of North America's mighty Coast Range, which, under varions names, forms a barrier against the inroads of the Pacific from Alaska to Cabo San Lucas at the southern tip.

The roads from San Diego are fairly good to Ensenada, but south of that they are "not maintained." There are no culverts or bridges aeross the numerous arroyos and short swift rivers flowing into the Pacific, so traveling southward is practically at a standstill during the winter.

In January 1940 a party consisting of Mr. and Mrs. H. R. Turver and Mr. and Mrs. John Strohbeen, all comnected with the Santa Cruz, California, Museum of Natural History, and the writer from Pacific Grove, California, were desirous of groing down the west coast of Lower California, at least as far as San Quentin Bay, but preferably farther. Investigation proved that the streams were swollen and the flats were boggy, so we had to look for another entrance into Mexico.

From Mexicali, on the border, a road extends south for about 135 miles to San Filipe a small fishing village on the Gulf and not far south of the mouth of the Colorado River.

This would be a desirable place to go, for the marine life there is the Panamic fauna, while that of the west coast is classified with the California Province, which means that you would find practically the same mollusks there as at San Diego, about half way down the peninsula, though, in the vicinity of Cedros Island, the Panamic and the California faunas seem to overlap. But no matter how desirable a trip to San Filipe might be, still it, like the West Coast trip was out of the question, for the road was actually impassable at that time of the year. A considerable portion is a quagmire in wet weather and a speedway when dry.

So we had to look still farther east, and learned of a so-called good road leading south from Nogales, Arizona, for 265 miles to Guaymas on the east side of the Gulf of California. This we then decided to explore, and thus it was that we discovered this naturalist's fairyland and became so enraptured of its charms that we are making it the object of our annual outing. Three such trips are behind us, and we are hoping for more as soon as war conditions permit.

Nogales is 498 miles east of San Diego, over such excellent roads that this added distance is not much of a handicap. The road in Mexico is well laid out and well graded, but it is not paved and in many places is poorly surfaced and quite rocky. The Mexicans take their roads philosophically and use only six ply tires on their autos. No four ply tires were for sale in that part of Mexico.

The towns of Magdalena and Santa Ana, some sixty and seventy-five miles below the border, are interesting places with their adobe buildings and narrow streets. Considerable mining of copper and silver is carried on in this region, and fairly extensive farming is found in the lowlands near by.

Hermosillo, the state Capital of Sonora, is about another hundred miles soutl.

It is an ancient city with modern improvement. It has paved strects and good schools. We found that both here and in Guaymas, English is taught in the high schools and in the upper grades of grammar schools. It is noteworthy that most of the business people speak English quite well and a mumber of them
take pride in having grotten part of their edueation in the United States. This all bodes well for Mexico and will help to make it advance rapidly. A feeling of friendship for Amerieans was miversally shown.

We went on to Guaymas and put up at the Miramar Beach Hotel which is located on a beautiful hay just north of Guaymas. Here the accommodations were good and the rates reasonable, and the exchange of our dollars into Mexiean pesos was also in our favor. Don't think for a minute that I am over enthusiastic when I say that the elimate is ideal, that colleeting is mexcelled and that sport fishing for marlin and sailfish is hard to beat anywhere else. At least such has been our experience from January to May of several years. During January of this year the thermometer in our brick cottage at Miramar never went above $70^{\circ} \mathrm{F}$., and at night with the windows wide open it failed to get below 60 degrees. What do you Eastern people think of this for Janmary? Is it any wonder that we could be out from morning till night in our shirtsleeves, wading, digging, collecting, sailing, or antoing to beaches farther off.

I have not bragged on the condition of Mexican roads, but in faimess will add that this year work is being done on all the roads I have referred to and that this summer will see the completion of the numerous culverts and concrete bridges now being built across the many "rados,' or dips, and small rivers between Hermosillo and the border.

About the people we came in contact with, and they were many and of different stations, we all formed favorable opinions. They were friendly and always willing to accommodate and aid us and that was a large factor in making our stays so pleasant. Among other things we took in a dance given in honor of one of the two contestants for queen of the ammal fiesta soon to be held. It was as nice an affair as could be seen anywhere. The young people were jolly and well mannered and absolutely no liquor was indulged in. The floor manager told us that liquor drinking by dancers was inconceivable, and that anyone breaking this rule would be summarily ejected. The girls wore beautiful dresses many of which were flowered or spangled or lavishly embroidered, and some were said to be heirlooms dating back for generations.

But now back to business: We didn't go to Mexico so many
times just to see the country or eren to observe the customs of the people; we went there primarily to study the marine life and to get specimens for our collections. We worked at that industriously, and as a result were able to bring back more than three hundred different speeies of which about three-fourths were mollusks. I will not attempt to give a complete list or even to mention very many, but will call attention to the four plates accompanying this. They show better than I can tell how we did our studying.

Plate 1, Conidae, shows ten rows of Comus, each row a different species and all taken last January within a few miles of Guaymas. The species figured on Plate 1 are:

| 1. Conus princeps L. | 6. C. mahogani Rre. |
| :--- | :--- |
| 2. C. purpurascens Brod. | 7. C. perplexus Sowb. |
| 3. C. virgatus Rve. | 8. C. archon Brod. |
| 4. C. regularis Sowb. | 9. C. gladiator Brod. |
| 5. C. comptus Gld. | 10. C. nux Brod. |

I think this is a record, for I have never seen or heard that all of them had previously been taken so far north.

Plates 2, 3 and 4 picture growth-series, and show these interesting gastropods from juveniles up through the developmental stages to the adults.

Melongena patula Broderip, shown in Plate 2, was found in numbers in the Miramar Lagoon, the young ones in shallow pools and the older ones well buried in the sand.

Strombus galeatus Swainson was the most difficult to get. It grows to a large size and is very heary. The Mexicans call it "Concha." It stays outside of extreme low tides.

F'usus dupetithouarsi Kiener, in Plate 3, was found this year in outside sand bars, while on other trips it was observed only: in muddy lagoons.

F'asciolaria princeps Sowerby, Plate 3, fig. 2, generally keep themselves in pretty deep water, but this year they were found in San Carlos Bay feeding on Phyllonotus bicolor, the beautiful murex which is so plentiful there.

Murex nigritus Philippi, plate 4. This series shows that the young are nearly white, something that has cansed considerable confusion. Frequently you find the white ones classified as Murcx princeps, which is an entirely different animal.


